

# Rhodora

JOURNAL OF

THE NEW ENGLAND BOTANICAL CLUB

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Vol. 19.

June, 1917.

No. 222.

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## A NEW SPECIES OF ERAGROSTIS OF THE OLD WORLD AND NORTH AMERICA.

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WHILE collecting in the railroad yards at Ithaca New York during the summer of 1914 the writer noticed that the abundant material of *Eragrostis pilosa* growing between the ties was not all uniform. A casual examination showed that two strains, differing much in appearance, existed side by side. Each strain was abundant, but the coarser strain predominated in the proportion, roughly, of two to one. The material collected at this time was laid aside and did not come to notice again until recently. A more careful examination now shows that the two strains differ materially in several respects.

After the resurrection of the material, it was taken, along with other problems, to the Gray Herbarium for study. There it was soon apparent that the coarser of the two strains was the common and widely distributed *E. pilosa* of Europe and America. After a long search, four specimens were found which matched the finer strain. Three of these were from Europe and one only from America. All three of the European specimens were indicated as weeds in gardens or between paving stones, one coming from Warsaw, one from Karlsruhe and the third from Berlin. The American specimen was collected by M. L. Fernald along a roadside at Alstead, New Hampshire. Later, the Herbarium of the New York Botanical Garden was visited, and a search there made for the plant. Three more specimens were found; one from Japan, one from Mickleton, New Jersey, and the other from Lancaster, Pennsylvania. These few specimens, it will be seen, indicate a rather remarkable distribution, as the plant must



be rare and local everywhere. Also, it has never as yet been found in the indigenous state, but always as a weed; and its home country is not yet known. At present it is a veritable "man without a country," and we shall look with interest for the discovery of its native haunts.

All of the specimens mentioned were extremely uniform, and matched our Ithaca specimen perfectly. The Karlsruhe specimen bore the name *E. pilosa* var. *condensata* Hackel, and was a portion of the material on which this variety was based, it being a part of the original material distributed by Kneucker. Our plant is therefore the *E. pilosa* var. *condensata* of Hackel. However, the study of all of the material mentioned has brought to light several other good distinguishing characters besides those mentioned by Hackel, so that in the judgment of the writer the plant is really a very good species, and should be recognized as such. The name *condensata* is in use, however, for another species, and therefore cannot be used. This being so, the name *peregrina* may very appropriately be substituted.

This plant is not to be included in the question of the status of *E. Purshii*. *E. pilosa* and *E. Purshii* are extremely close in relationship, and there can be a legitimate doubt as to whether both are good species, but our plant differs in several important respects from each.

Of our plant Hackel says, translated: — "The present plant is to be distinguished from the typical form by: solitary branches of the panicle without hairs in their axils (which however are sometimes lacking in the typical form), the branches of the panicle are spikelet-bearing to the base so that the panicle appears much denser. The spikelets are short-pedicelled (the next to the last on each branch possesses a pedicel about 1 mm. long). In the typical form the branches of the panicle are in 2's or 4's and branched from the one-third or one-half point upward, and loosely provided with spikelets whose pedicels are at least 2 mm. long. The plant is closely related to the *E. Purshii* (*caroliniana*) but is distinguished from it by the absence of conspicuous lateral nerves on the flowering glume."

The writer finds that the differences noted by Hackel hold fairly well for all the other specimens examined. The branches of the panicle however are sometimes solitary in smaller forms of *E. pilosa* (including *E. Purshii*). Also, in smaller plants of the latter species the spikelets extend sometimes far toward the base of the branches. The spikelets are in the main shorter-pedicelled than in *E. pilosa*.



The lateral nerves of the flowering glumes are always inconspicuous, but there are occasional specimens of *E. pilosa* in which they are equally indistinct. As an additional character may be mentioned the smooth empty glumes, which in *E. pilosa* are usually, but not always, scabrous on the keel. The florets are also somewhat smaller. The two most constant differences, however, are the denser panicle, which resembles that of *Agrostis alba* or *Panicum agrostoides*, and especially the absence of the long pilose hairs on the auricles of the sheath. The plant is much more constant in its characters than is *E. pilosa*. It can be readily recognized by its general appearance.

The following is a more detailed description than is given by Hackel:

**ERAGROSTIS peregrina**, sp. nov. (*E. pilosa* var. *condensata* Hackel, Allgem. Bot. Zeitschr. vii. 13 (1901), non *E. condensata* Steud.) Annuæ; culmis pluribus ascendentibus vel erectis glabris basi aliquid geniculatis; foliis 2–6 cm. longis raro longioribus 1–2.5 mm. latis glabris, ligula e pilis tenuioribus 0.5 mm. longis vel brevioribus formata, vaginis aliter summo nudis; panicula subdensa 5–12 cm. longa 2.5–4 cm. diametro oblonga, ramis plerumque solitariis, longioribus 1–4 plerumque 2–3 cm. longis angulo 45° patentibus densius spiculiferis fere ad basim; axillis glabris; spiculis 6–10-floris 3–5 mm. longis 1–2 mm. latis in pedicellis brevissimis 0.5–2.5 mm. longis, glumis vacuis parvis lanceolato-ovatis acutissimis hyalinis inaequalibus, superiore glumis florentibus duplo brevioribus, carina non scabra; gluma florente (lemmate) aliquanto divaricata ovata acuta 1.4 mm. longa tenui et membranacea infra viride supra castaneo-rubra ad apicem palidioribus, carina apicem versus scabra, nervis lateralibus indistinctis, caryopsibus 3–6 mm. longis ovali-oblongis sucino-fuscis.

Annual; culms several, somewhat geniculate at the base, ascending or erect, glabrous: leaves 2.6 cm. long, rarely longer, 1–2.5 mm. wide, glabrous; ligule of fine hairs, 0.5 mm. long or less; sheaths otherwise naked at the summit; panicle rather dense, 5–12 cm. long, 2.5–4 cm. broad, oblong; branches mostly solitary, the longer 1–4 (mostly 2–3) cm. long, spreading at an angle of 45°, rather densely spikelet-bearing to near the base; the axils glabrous: spikelets 6–10-flowered 3–5 mm. long, 1–2 mm. wide, on very short pedicels 0.5–2.5 mm. long; empty glumes small, lance-ovate, very acute, hyaline, unequal, the upper about one half the length of the flowering glume; keel not scabrous; flowering glume (lemma) somewhat spreading, ovate, acute, 1.4 mm. long, thin and membranous, greenish below, chestnut-red above, the tip paler; keel scabrous toward the apex; lateral nerves indistinct; caryopsis 0.5–0.6 mm. long, oval-oblong, amber-brown.

Specimens examined: GERMANY: "Auf Gartenland im Grossherzoglichen Hofgarten, Karlsruhe, seit langen Jahren äusserst lästiges und schwer zu beseitigendes Umkraut: sandiger humus.



Begleitpflanzen *Euphorbia polygonifolia* Jacq. Ca. 117 m. ü. d. M: 17 July, 1900," *A. Kneucker*: Gramineae exsiccatae, no. 115. Type collection of *E. pilosa* var. *condensata* Hackel; Botanic Garden, Berlin, Aug. 2, 1877, *P. Magnus*. POLAND: Between paving stones, escaped, Warsaw, Sept., 1885, *Przybulski*. JAPAN: Plants of the Liu Kiu Islands, collected for L. Boehmer & Co. in 1904, no. 174. NEW HAMPSHIRE: Cheshire County; dry roadside, Alstead, Aug. 2, 1900, *M. L. Fernald*, no. 360. NEW JERSEY: Gloucester County; Mickleton, Aug., 1887, *B. Heritage*. PENNSYLVANIA: Lancaster County; Vicinity of Lancaster, Sept., 1889, *J. K. Small*. NEW YORK: Tompkins County; in gravel and cinders between railroad ties, Ithaca, Aug. 12, 1914, *K. M. Wiegand*, no. 1669.

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## RANGE OF *CAREX NOVAE-ANGLIAE* EXTENDED INTO PENNSYLVANIA.

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SINCE the appearance of Prof. T. C. Porter's estimable *Flora of Pennsylvania* in 1903, discoveries of indigenous species heretofore unknown in the region have not been so overwhelmingly numerous that they are without a certain interest. Some index of the almost exhaustive exploration which Prof. Porter and his associates succeeded in achieving over an area of really very considerable size and diversity is shown by the fact that only about one in ten of the additions in recent years is an indigenous species which was well known in Porter's day. For it will be remembered that in the numerical count of species there are two main sources of so-called "additions" to the flora of any well known area: new introductions and species due to work of more recent revision and segregation. In these two categories are unquestionably included the great majority of species (now known to occur in the state) which are not recognized in Porter's *Flora*.

As a further suggestion of the completeness of Porter's Pennsylvania collection may be noted the fact that it contains an excellent representation of species recently described or ones only lately recognized as elements of our flora. Thus, for example, there is ample material from the state of *Echinochloa muricata*, *Muhlenbergia foliosa*,